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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,580	07/21/2003	Yasushi Sugaya	826.1881	4700

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EXAMINER

HUGHES, DEANDRA M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,580	Applicant(s) SUGAYA ET AL.	
	Examiner Deandra M. Hughes	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 15 February 2006.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-3,5-12 and 14-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-3, 5-12, and 14-21 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.
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DETAILED ACTION

Response to Amendment

1. The amendment filed 02/15/06 has been entered.

Drawings

2. The drawings were received on 02/15/06. These drawings are accepted.

Response to Arguments

3. Applicant's arguments filed 02/17/06 have been fully considered but they are not persuasive. Applicant argues "Lelic does not relate to a response time for changing optical power of an auxiliary light in the manner recited..." (Remarks; pg. 7, lines 27-28).

This argument is not persuasive because the Examiner does not rely upon Lelic to teach changing a prescribed response time for changing optical power of an auxiliary light. Rather, the Examiner relies upon Lelic to teach "gain controllers with sub-controllers for adjusting the response time of the pump controllers." (see Office Action dated 10/20/05; section #9, lines 6-8). Consequently, Applicant does not clearly point out the patentable novelty, which he thinks the claims present in view of the state of the art disclosed by the references cited. Further, they do not show how the amendments avoid such references or objections. See 37 CFR 1.111(c).

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuzaki (US 6,775,055 filed Jul. 20, 2001) in view of Okuno (US 5,966,236 published Oct. 12, 1999).

With regard to claim 12, Tsuzaki discloses a Raman optical amplifier (fig. 9) that amplifies multi-wavelength light, comprising:

- an optical amplification medium (#51) into which the multi-wavelength light is inputted;
- a pumping light source (#53₂) supplying pumping light to said optical amplification medium;
- an auxiliary light source (#53₁) generating auxiliary light with a wavelength shorter than a center wavelength of the multi-wavelength light (figs. 5A-5D);
- an optical device (#52₁) guiding the auxiliary light to said optical amplification medium in the same direction (#53₁ is co-propagating) as that of the multi-wavelength light;
- a detector (#56₁) detecting the input light;
- and an auxiliary light controller (#54) controlling the optical power of the auxiliary light based on the change of the wavelength arrangement of the plurality of segments of signal light detected by said detector (control section #54 takes an input from #56₁).

Tsuzaki does not specifically disclose the detector detecting power wavelength arrangement of a plurality of segments of signal light included in the multi-wavelength

light. However, Okuno teaches an input channel count detector as a function of the input light (fig. 8, #19). It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to analyze the input power as a function of the channel count, i.e. wavelength arrangement, for the advantage of flattening the gain of the amplifier.

6. Claims 1-3, 5-9, 10-11, 14-15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuzaki (US 6,775,055 filed Jul. 20, 2001) in view of Lelic (US 6,943,937 filed May 17, 2001).

With regard to claims 1, 3, 5-9, 10-11, 14-15, and 17-21, Tsuzaki does not specifically disclose changing the power of the auxiliary light with a prescribed response time base don the change of input power of the WDM signal. However, Lelic teaches gain controllers with sub-controllers (fig. 2A, #231 and #232; col. 10, lines 30-35) for adjusting the response time of the pump controllers. It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to apply the sub-controllers of Lelic to the pump control of the Tsuzaki for the advantage of minimizing the impact of add/dropping signal channels.

Further, with regard to claim 2, Tsuzaki does not specifically disclose that the auxiliary light and the pump have the same wavelength. However, Tsuzaki teaches that one may optimize gain of a particular channel by appropriately setting the pump wavelength (col. 1, line 34). The auxiliary light is merely another pumping light. It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to set the pump wavelength and the auxiliary light

wavelength equal for the advantage of increasing gain the in the channel one Stoke's shift away from the pump light.

Further, with regard to claim 11, Tsuzaki does not specifically disclose a storage unit storing pattern information. However, Tsuaki discloses the storage of channel count information in the controller (col. 5, lines 1-10). It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to store a look-up table in the controller for the advantage of driving the pump power at optimal conditions for gain flattening.

With regard to claims 14-15, the phrase beginning with, "is set to an amount..." is essentially a method limitation or a statement of intended or desired use. This claim, as well as other statements of intended use, does not serve to patentably distinguish the claimed structure over that of the reference. See In re Pearson, 181 USPQ 641; In re Yanush, 177 USPQ 705; In re Finsterwalder, 168 USPQ 530; In re Casey, 512 USPQ 235; In re Otto, 136 USPQ 458; Ex parte Masham, 2 USPQ 2nd 1647.

See MPEP § 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuzaki (US 6,775,055 filed Jul. 20, 2001) in view of Lelic (US 6,943,937 filed May 17, 2001), as is applied to claim 1 above, and further in view of Ziari (US 6,522,796 filed Oct. 24, 2000).

Tsuzaki in view of Lelic does not specifically disclose a depolarizer for depolarizing the auxiliary light. However, Ziari teaches depolarization of pump lights for Raman amplifiers (e.g. #220). It would have been obvious to one of ordinary skill (e.g., an optical engineer) in the art at the time the invention was made to depolarizer the auxiliary light for the advantage of reducing polarization dependent gain.

Conclusion


8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M. Hughes whose telephone number is 571-272-6982. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Deandra M Hughes
Primary Examiner
Art Unit 3663

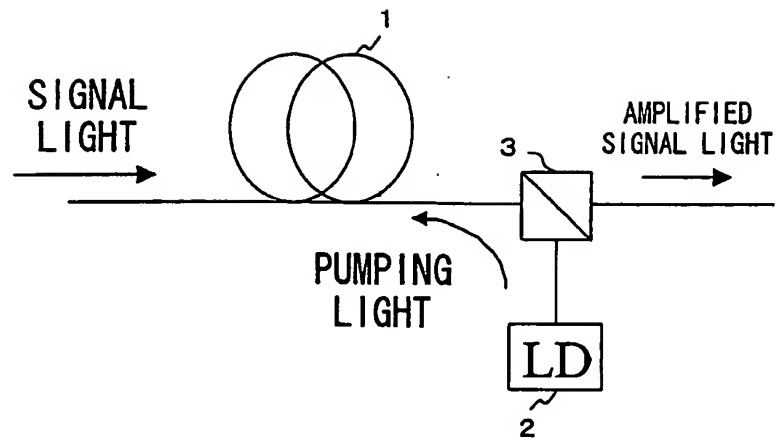


FIG. 1

PRIOR ART

OK to enter
4/5/06
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